

## **Fortnightly report for the Minister for Energy 28 March 2024**

This report summarises items that may be of interest to the Minister for Energy but not necessarily require a formal briefing. Further information on any topic can be provided on request. Substantive items and decision papers will be provided to the Minister in the form of briefings.

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## 1. Current and upcoming publications and advice

Strategic priority	Title	Purpose	Action and timing
Improving security of supply and enabling innovation	Code amendment omnibus two: Decision paper	Three unrelated minor Code amendments including: <ol style="list-style-type: none"> <li>1. Ensuring the distributor arm's length and corporate separation rules apply for all generation technology.</li> <li>2. Requiring distributors to advise the market and system operator the amount of available controllable load for a grid emergency.</li> <li>3. A general update to Part 6A (Separation of distribution from generating and retailing) to align the wording with the Code drafting standards.</li> </ol>	Public release of decision 28 March 2024
Building trust and confidence	Code exemption	We have granted an exemption to Energy Clearing House Ltd (as the clearing manager) from complying with the Code to expedite the settlement of prices from 9 August 2021.	Gazetted 22 March 2024. Exemption expires 31 July 2024.

## 2. Consultations underway

Strategic priority	Title	Purpose	Action and timing
Improving security of supply	Future system operation	Consultation on future of New Zealand's system operation.	BR-24-0003 sent 23/01/24 Consultation closes 11/04/24

### 3. Proposed additional verbal briefings

Name	Purpose	Indicative date*	Authority attendees
Wholesale market	General Market Information	3 April 2024	Sarah Gillies Doug Watt
Supercharging EVs: Authority's work in connection pricing	Update on Authority work in the EV connection space	10 April 2024	Sarah Gillies, Tim Sparks
Authority project into risk management in the retail market	Briefing on Authority work to review independent retailer complaints about competition in the market	8 May 2024 - as part of CE/Minister meeting	Sarah Gillies, Andrew Millar, Rob Bernau

### 4. Key external engagements

- Minister and Authority meeting: 3 April 10.30am-10.50am
- Network event – “Meet Mercury’s Board & Management”: 8 April
- EA and Commerce Commission meeting: 15 April

## 5. Deep dive: Generation investment pipeline

**Purpose:** This deep dive presents some key insights on the generation investment pipeline based on the Authority's 2023 generation investment survey and our analysis.

### Key points

- The 2023 generation investment survey shows that the costs of new supply has risen to ~90 \$/MWh from ~80 \$/MWh but remains below ASX futures prices.
- Committed generation has increased significantly since 2022, with annual output capability (once built) rising from 2,600 GWh to nearly 5,000 GWh.
- In addition to what has been completed or committed, we estimate that new generation with an annual output of 1,700 GWh will need to be built by 2025.
- Given the importance of understanding the investment pipeline we are initiating a project to collect and publish data on the pipeline of investments in new generation.

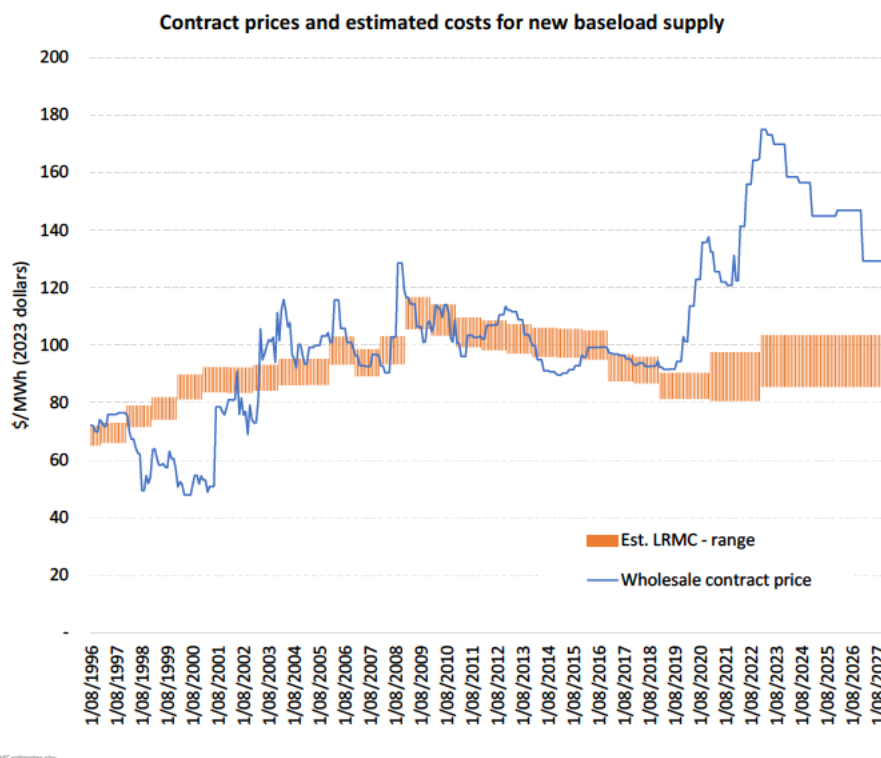
### New build costs have risen but are still below futures contract prices

- 5.1 Data from our 2023 generation investment survey<sup>1</sup> indicates the cost of new supply has risen to ~90 \$/MWh from ~80 \$/MWh (baseload equivalent at Otahuhu) due to tight supply chains (especially for wind) and higher interest rates. These higher costs are a headwind for developers.
- 5.2 Figure 1 shows while ASX futures prices show a declining forward profile, they are well above our estimated cost of new supply to 2027. The gap between costs and futures prices is a much narrower at Benmore than Otahuhu (noting Benmore Cal 2027 prices are around 25% below Otahuhu Cal 2027 prices). This is probably due to the forward prices at Otahuhu reflecting North Island capacity risk.

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<sup>1</sup> [PowerPoint Presentation \(ea.govt.nz\)](#)

**Figure 1: the convergence of the forward price and the estimated cost of baseload supply**



### Pipeline of potential developments has grown further

- 5.3 Committed generation has lifted significantly compared to 2022, with annual output capability (once built) rising from 2,600 GWh to nearly 5,000 GWh. This is slightly more than the amount of generation required to displace the uneconomic thermal generation on the system. The annual development rate (based on projects that have been completed or committed) for the period 2021-2025 is over three times the annual development rate achieved during 2011-2020.
- 5.4 There has also been a step up in the pipeline of “actively pursued” generation that could be completed by 2027 (mostly solar and wind) compared to last survey. The annual generation capability of projects in this category has risen from 12,700 GWh to 20,800 GWh.
- 5.5 There has been a surge in development of distributed generation, including large utility-scale projects, but also growth in mid-scale and small-scale solar activity, although this makes up a small proportion of the generation pipeline.
- 5.6 Most developers are pursuing solar, wind or geothermal projects. There is some interest in batteries and other flexible plant (eg, biofuels) but it is currently limited.

### Investment requirements and demand outlook

- 5.7 In addition to what has been completed or committed, we estimate that new generation with an annual output of 1,700 GWh will need to be built by 2025. This generation is needed to meet projected demand growth (as there is sufficient committed generation to displace uneconomic thermal generation). This figure has decreased from last year’s estimate (of just over 3,000 GWh), mostly due to the increase in committed generation since last year’s survey.

- 5.8 Extending our analysis to 2027, we estimate that new generation (on top of what has already been completed or committed) with an annual output of 2,700 GWh will need to be built by 2027. This generation is needed to meet projected demand growth and to replace lost generation from the retirement of the Wairakei station.
- 5.9 With sufficient generation projects now built/committed to displace uneconomic thermal generation, the timing of further renewable development is expected to be demand-led. Demand growth can be lumpy and hard to predict, so these active projects will need to be nimble and able to respond to demand growth quickly.
- 5.10 On the positive side, there seem to be a slew of projects at (or close to) a final investment decision. However, developers' ability to quickly change gears if required is impaired by a range of factors – most notably consenting and connection processes as discussed below.

### **Factors hindering faster development**

- 5.11 Environmental consenting processes remain a critical factor affecting the generation pipeline and development rate. There was a strong uptake of the RMA fast-track option in the last 12 months. We expect a strong uptake of the recently announced standalone fast track regime by developers.
- 5.12 Concerns about the application of the Overseas Investment Act regime have reduced, although costs and timeframes remain a factor for some developers.
- 5.13 Connection to the grid tended to be the most significant barrier identified by developers, although most considered Transpower's queueing system to be an improvement. Connection at the distribution level is also an issue – at this stage this is more due to resourcing and learning curves but network pricing and regulatory settings will become more important for future waves of investment. The Authority has a broad programme of work underway in the distribution space including pricing and reform of other settings inhibiting progress in this critical part of the sector.
- 5.14 Demand outlook is becoming more of a focus, as the driver of renewable investment shifts from thermal displacement to demand. Demand has been relatively flat historically, and although there is consensus it will increase significantly by 2050, exact timings are uncertain. Uncertainty about the Tiwai smelter affects development timing for some projects but is considered a temporary factor.
- 5.15 Developers expressed a variety of views regarding the necessity of securing power purchase agreement (PPA)s pre-final investment decision. While the PPA market is not deep, there are signs it has developed in the last 12-18 months.
- 5.16 Tight markets for equipment and labour remain key challenges for developers, putting upward pressure on build costs – especially for wind projects. Capital remains available for projects but at a significantly higher cost – the softer NZD is also putting upward pressure on costs.

### **Ongoing monitoring of investment in the New Zealand electricity sector**

- 5.17 Given the importance of understanding the investment pipeline, the Authority is initiating a project to collect and publish data on the pipeline of investments in new generation in both the transmission network and distribution network (above a certain capacity). The data will include an assessment of the status of project and their locations.
- 5.18 The intention is to develop a dashboard that will provide ongoing and increasingly sophisticated measurement of key investment data (when, where and cost).